

Title (en)  
THERMOPLASTIC POLYURETHANE RESIN FOR FOAMING AND PRODUCTION METHOD THEREOF, AND MOLDED ARTICLE

Title (de)  
THERMOPLASTISCHES POLYURETHANHARZ ZUR SCHÄUMUNG UND HERSTELLUNGSVERFAHREN DAFÜR UND FORMARTIKEL

Title (fr)  
RÉSINE POLYURÉTHANE THERMOPLASTIQUE POUR MOUSSAGE, SON PROCÉDÉ DE PRODUCTION, ET ARTICLE MOULÉ

Publication  
**EP 3543273 A4 20200603 (EN)**

Application  
**EP 17871310 A 20171114**

Priority  
• JP 2016224421 A 20161117  
• JP 2017040836 W 20171114

Abstract (en)  
[origin: US2019211136A1] A foaming thermoplastic polyurethane resin is a reaction product of a polyisocyanate component containing a bis(isocyanatomethyl)cyclohexane and a polyol component. In a peak of chromatogram obtained by measurement of the foaming thermoplastic polyurethane resin with gel permeation chromatography, the area of a high molecular weight component having a weight average molecular weight of 400,000 or more with respect to the total area of the peak is 25% or more and 60% or less.

IPC 8 full level  
**A43B 13/04** (2006.01); **C08G 18/00** (2006.01); **C08G 18/10** (2006.01); **C08G 18/66** (2006.01); **C08G 18/75** (2006.01); **C08G 101/00** (2006.01)

CPC (source: EP KR US)  
**A43B 3/12** (2013.01 - EP); **A43B 13/04** (2013.01 - EP KR US); **A43B 13/122** (2013.01 - EP); **A43B 13/125** (2013.01 - EP);  
**A43B 13/187** (2013.01 - EP); **A43B 13/42** (2013.01 - KR); **B24B 37/00** (2013.01 - US); **B29D 35/122** (2013.01 - EP);  
**C08G 18/10** (2013.01 - EP US); **C08G 18/14** (2013.01 - KR); **C08G 18/227** (2013.01 - EP US); **C08G 18/242** (2013.01 - EP US);  
**C08G 18/3206** (2013.01 - EP US); **C08G 18/4277** (2013.01 - EP US); **C08G 18/4833** (2013.01 - EP US); **C08G 18/4854** (2013.01 - EP US);  
**C08G 18/664** (2013.01 - EP); **C08G 18/752** (2013.01 - KR US); **C08G 18/753** (2013.01 - EP US); **C08G 18/757** (2013.01 - EP);  
**C08J 9/12** (2013.01 - US); **C08J 9/18** (2013.01 - US); **C08J 9/228** (2013.01 - US); **C08L 75/04** (2013.01 - KR);  
**C08G 2101/00** (2013.01 - EP KR US); **C08G 2110/0066** (2021.01 - EP US); **C08G 2350/00** (2013.01 - EP US);  
**C08G 2410/00** (2013.01 - EP KR US); **C08J 9/122** (2013.01 - EP); **C08J 9/18** (2013.01 - EP); **C08J 9/228** (2013.01 - EP);  
**C08J 2201/03** (2013.01 - EP US); **C08J 2203/06** (2013.01 - EP); **C08J 2203/08** (2013.01 - EP US); **C08J 2375/06** (2013.01 - EP US);  
**C08J 2375/08** (2013.01 - EP US)

Citation (search report)  
• [E] EP 3321086 A1 20180516 - MITSUI CHEMICALS INC [JP]  
• [XA] US 2015183922 A1 20150702 - NAKAGAWA TOSHIHIKO [JP], et al  
• [IA] US 2009036630 A1 20090205 - SASANO SHIGETOSHI [JP], et al  
• See references of WO 2018092744A1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**US 10633483 B2 20200428**; **US 2019211136 A1 20190711**; CN 109071766 A 20181221; CN 109071766 B 20190927;  
EP 3543273 A1 20190925; EP 3543273 A4 20200603; EP 3543273 B1 20220126; ES 2907349 T3 20220422; JP 6338809 B1 20180606;  
JP WO2018092744 A1 20181122; KR 102021270 B1 20190911; KR 20190041018 A 20190419; TW 201829523 A 20180816;  
TW I738922 B 20210911; WO 2018092744 A1 20180524

DOCDB simple family (application)  
**US 201716099383 A 20171114**; CN 201780027713 A 20171114; EP 17871310 A 20171114; ES 17871310 T 20171114;  
JP 2017040836 W 20171114; JP 2018513894 A 20171114; KR 20197009643 A 20171114; TW 106139708 A 20171116